

Supplementary

Figure S1

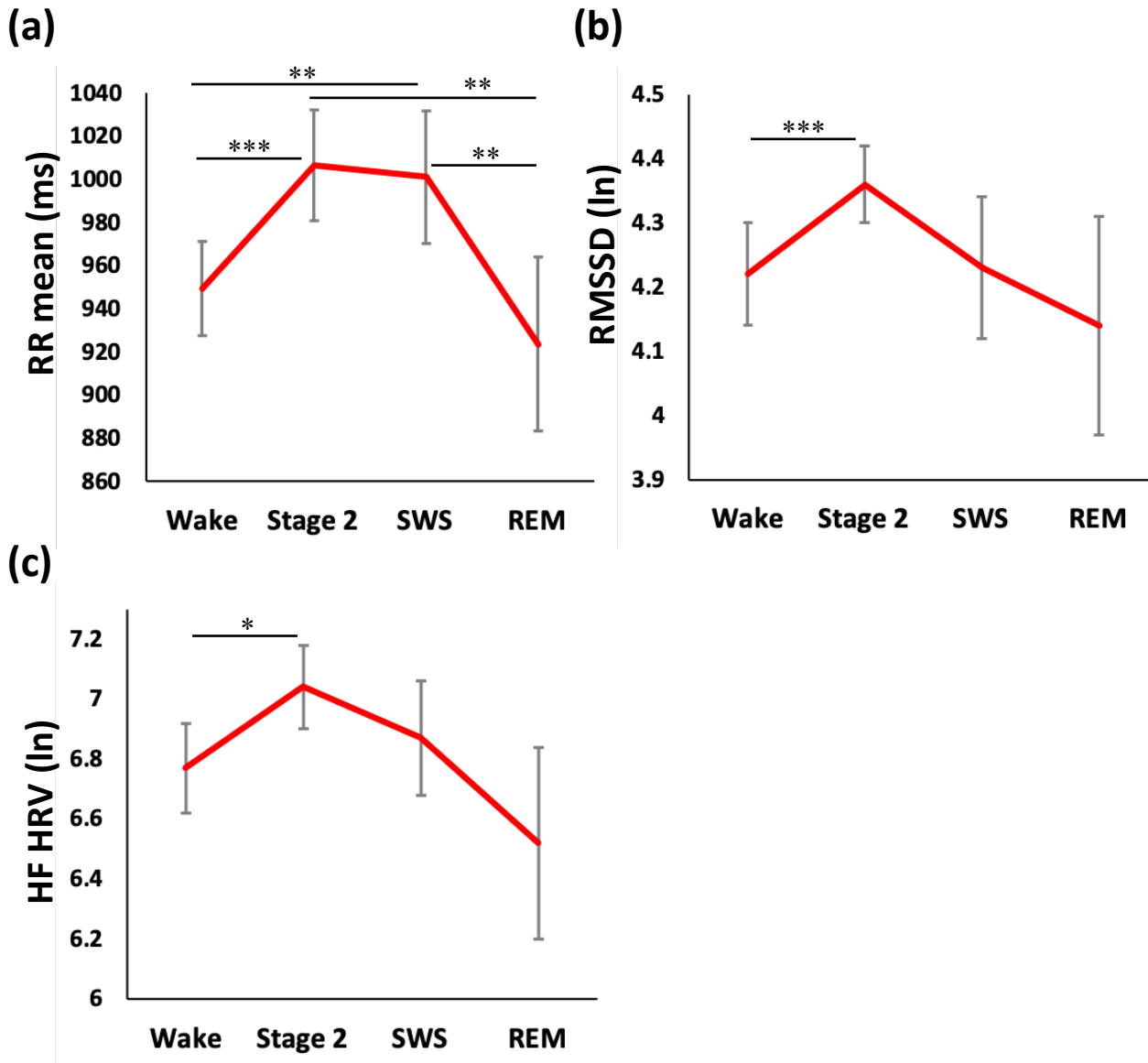


Figure S1 (a–c) Heart rate variability (HRV) components across sleep stages. (a) Mean of RR intervals (ms) (b) RMSSD (ln) (c) HF HRV (ln). Asterisks above bars indicate significant differences between Sleep stages (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$). Error bars represent standard error of the mean. The between-stage effects were based on the LME model examining HRV variables across sleep stages (Wake, Stage 2, SWS, REM).

Figure S2

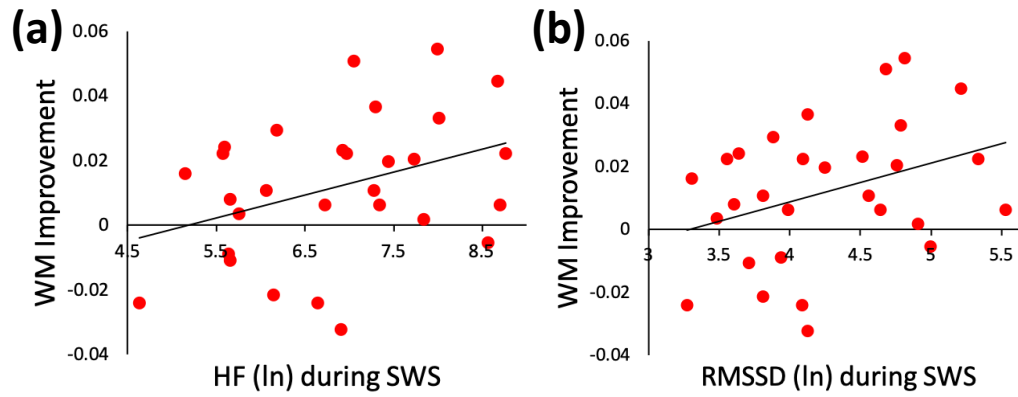


Figure S2 Working Memory improvement and Autonomic Activity. Association between WM improvement and (a) HF HRV (ln) during SWS ($r = 0.367$, $p = 0.05$); (b) RMSSD (ln) during SWS ($r = 0.347$, $p = 0.065$).